

Claims

1. A UV-resistant material, characterized in that the material use molecular sieve based host-guest nano-composite materials as the ultraviolet absorption agent.
2. The UV-resistant material of claim 1, wherein the host of molecular sieve based – materials is selected from one or more of microbore zeolite molecular sieve such as X, Y, A, STI, ZSM-5.
3. The UV-resistant material of claim 1, wherein the guest of the molecular sieve based host-guest nano-composite material is selected from one or more of TiO_2 , ZnO , CeO_2 , Fe_2O_3 metal oxide nano-cluster.
4. The preparation method of UV-resistant material of claim 1, characterized in that the method using any one or more of TiCl_3 , ZnCl_2 , $\text{Zn}(\text{NO}_3)_2$, CeCl_3 , $\text{Ce}(\text{NO}_3)_3$, FeCl_3 , $\text{Fe}(\text{NO}_3)_3$, FeSO_4 as the initiating material to synthesize the host-guest nano-composite materials by means of ion exchange, which are TiO_2 , ZnO , CeO_2 , Fe_2O_3 metal oxide nano-cluster and the molecular sieve compound, the product is used as the ultraviolet absorption agent to obtain the UV-resistant material.
5. The preparation method of claim 4, wherein the ion exchange method include following steps: dissolving the initiating material in water, adding molecular sieve into the solution, resting or stirring for 1~6hours, filtrating, washing and drying, torrefying for 4-24hours at 400-600°C.
6. The preparation method of claim 4, wherein the ion exchange method include following steps: dissolving the initiating material in water, adding low-silicon molecular sieve into the solution, resting for 1hour, filtrating, washing, drying at 80 °C, torrefying for 12hours at 500°C.
7. The preparation method of UV-resistant material of claim 1, characterized in that the method using butyl titanate as the initiating material to synthesize host-guest nano-composite materials of TiO_2 cluster within molecular sieve compound by means of hydrolytic reaction, the product is used as the ultraviolet absorption agent to obtain the UV-resistant material.

8. The preparation method of claim 7, wherein the hydrolytic reaction include following Steps: mixing butyl titanate with high-silicon molecular sieve in a non-polar solvent, with inert gas shielding, refluxing and agitating for 4-48hours at 50-100 °C, washing the product by alcohol type solvent, drying at 60-100 °C, torrefying for 4-24 hours at 400-600 °C.
9. The use of the UV-resistant material of claim 1 in cosmetics.
10. The use of the UV-resistant material of claim 1 in coatings.
11. The use of the UV-resistant material of claim 1 in rubber or plastics industry.